

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

1. (Currently Amended) A method for detecting overlay errors, the method comprising directing a primary electron beam to interact with an inspected object; the inspected object having a first feature formed on a first layer of the inspected object, ~~and a second feature formed on a second layer of the inspected object, and~~ an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer and affects a shape of an area of the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the area of the first layer; and receiving detection signals from at least one detector and determining overlay errors.
2. (Previously Presented) The method of claim 1 wherein at least some of the directed electrons are reflected or scattered at small angle in relation to the inspected object.
3. (Previously Presented) The method of claim 1 wherein the step of directing comprises directing electrons of the primary electron beam to interact with the second feature.
4. (Previously Presented) The method of claim 3 wherein the step of detecting comprises detecting electrons reflected or scattered from the second feature.
5. (Original) The method of claim 1 further comprising a preliminary step of charging the second feature.
6. (Currently Amended) A method for detecting overlay errors, comprising directing a primary electron beam to interact with a first feature and a second feature of an inspected object, wherein an intermediate layer is positioned between the first and second layers and wherein the first feature is formed on a first layer of the inspected object and the second feature formed on a second layer of the object, the second feature is buried under the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the first and second features; and receiving detection signals from at least one detector and determining overlay errors.

7. (Original) The method of claim 6 wherein at least some of the detected electrons are reflected or scattered at small angle in relation to the inspected object.
8. (Original) The method of claim 6 wherein the second feature affects a shape of an area of the first layer.
9. (Previously Presented) The method of claim 8 wherein detecting comprises detecting electrons reflected or scattered from the area of the first layer.
10. (Original) The method of claim 6 further comprising a preliminary step of charging the second feature.
11. (Currently Amended) A system for overlay error measurements, comprising: means for directing a primary electron beam to interact with an inspected object having a first feature formed on a first layer of the inspected object, and a second feature formed on a second layer of the inspected object, and an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; at least one detector for detecting electrons reflected or scattered from the inspected object, wherein at least some of the directed electrons are reflected or scattered at small angle in relation to the inspected object; and a processor, coupled to the at least one detector, for receiving detection signals from the at least one detector and determining overlay errors.
12. (Previously Presented) The system of claim 11 wherein the at least one detector is positioned to detect electrons that are reflected or scattered at small angle in relation to the inspected object.
13. (Original) The system of claim 11 wherein the means for directing are capable of directing electrons to interact with the second feature.
14. (Previously Presented) The method of claim 13 wherein the at least one detector is positioned to detect electrons reflected or scattered from the second feature.
15. (Currently Amended) A system for detecting overlay errors, the system comprises: means for directing a primary electron beam to interact with a first feature and a second feature

of an inspected object, the first feature formed on a first layer of the inspected object, ~~and the~~ second feature formed on a second layer of the inspected object, and an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; at least one detector for detecting electrons reflected or scattered from the first and second features; and a processor, coupled to the at least one detector, for receiving detection signals from the at least one detector and determining overlay errors.

16. (Previously Presented) The system of claim 15 wherein the at least one detector is positioned to detect electrons reflected or scattered at small angle in relation to the inspected object.

17. (Original) The system of claim 15 wherein the second feature affects a shape of an area of the first layer.

18. (Previously Presented) The system of claim 17 wherein the at least one detector is positioned to detect electrons reflected or scattered from the area of the first layer.